

Title (en)  
MULTIPURPOSE AIR VEHICLE

Title (de)  
MEHRZWECKLUFTFAHRZEUG

Title (fr)  
VÉHICULE AÉRIEN POLYVALENT

Publication  
**EP 3434593 B1 20200819 (EN)**

Application  
**EP 16916858 A 20160926**

Priority  
KR 2016010730 W 20160926

Abstract (en)  
[origin: US2018346113A1] Disclosed is a multipurpose air vehicle including a frame (1) on which a propeller (11) and a mechanical unit (10) equipped with an engine are mounted, and a cabin (2) is coupled inside the frame (1). The frame (1) is constructed by upper and lower circular plates (101, 102) and curved posts (111, 112, 113, 114) that interconnect the upper and lower circular plates (101, 102), and is provided with two or more arms (12) that can protrude and retract, and a propeller (11) is provided on the tip end of each arm (12). The cabin (2) includes a circular plate member (3) and further includes at least four connectors (21) provided on the front, the rear, the left, and the right ends thereof, and each connector (21) has a tip end installed on a rail (13) of the frame (1) so as to guide pivoting of the cabin (2). The multipurpose air vehicle may freely perform upward and downward movement and forward and rearward movement, and thus may be used anywhere in the air, ground, or water. Moreover, the multipurpose air vehicle may allow the cabin (2) to maintain horizontal balance and to provide a lift force as needed, regardless of the flying angle during the upward or downward movement of the air vehicle.

IPC 8 full level  
**B64C 27/08** (2006.01); **B64C 27/12** (2006.01); **B64C 29/00** (2006.01); **B64C 35/00** (2006.01); **B64C 39/02** (2006.01)

CPC (source: EP KR RU US)  
**B64C 1/062** (2013.01 - US); **B64C 27/08** (2013.01 - US); **B64C 27/12** (2013.01 - KR US); **B64C 27/52** (2013.01 - US); **B64C 29/0033** (2013.01 - EP US); **B64C 35/00** (2013.01 - US); **B64C 35/001** (2013.01 - KR); **B64C 35/006** (2013.01 - KR); **B64C 39/02** (2013.01 - US); **B64U 10/13** (2023.01 - EP KR RU); **B64U 30/20** (2023.01 - EP KR RU); **B64C 35/00** (2013.01 - EP); **B64U 20/70** (2023.01 - EP KR RU); **B64U 30/296** (2023.01 - EP KR RU)

Cited by  
CN110203406A

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**US 10279905 B2 20190507**; **US 2018346113 A1 20181206**; CA 3022862 A1 20180329; CA 3022862 C 20200421; CN 109071009 A 20181221; CN 109071009 B 20190924; EP 3434593 A1 20190130; EP 3434593 A4 20191009; EP 3434593 B1 20200819; JP 2019529199 A 20191017; JP 6616024 B2 20191204; KR 102054161 B1 20191210; KR 20190057056 A 20190527; RU 2721030 C1 20200515; WO 2018056484 A1 20180329

DOCDB simple family (application)  
**US 201615575806 A 20160926**; CA 3022862 A 20160926; CN 201680084546 A 20160926; EP 16916858 A 20160926; JP 2018566394 A 20160926; KR 2016010730 W 20160926; KR 20197007577 A 20160926; RU 2018137699 A 20160926